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10/822,910	04/13/2004	Ted Andrew Peters	MSFT-3490/307339.01	3570
41505 7590 01/09/2008 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER ABDUL-ALI, OMAR R	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/822,910

Applicant(s)

PETERS ET AL.

Examiner

Omar Abdul-Ali

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-38 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/11/2007.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The following action is in response to the response filed November 4, 2007. Amended Claims 1-38 are pending and have been considered below.

1. Examiner's Note: The prior art rejections have been withdrawn as necessitated by Applicant's Amendments.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8, 11-18, 22-29, and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US 2001/0042140) in view of Friedman et al. (US 6,167,455).

Claim 1: Calder discloses a system for binding commands between a source and target comprising:

a. at least one computing device comprising a data binding engine that receives at least one binding statement mapping a command to an element of the target (page 3, paragraph 33/page 5, paragraph 57). Specifically, Calder discloses associating (binding) a command with a data handler that is associated with the data source

(target). The command map is used to locate the appropriate command for performing a desired operation on data provided by the source. The binding engine in this case would be the automatic association of the command objects with the data handler through a command map.

Calder discloses binding an object representing the target (data handler) to an underlying model object (data source) of an underlying application logic (the application obtains a data source that is appropriate for retrieving stored data) by a source object (data source object) and a query path (determining which data source is appropriate for retrieving stored data) (Page 4, paragraph 39-41). Calder does not explicitly disclose a collection of underlying state is represented by the application logic. Friedman discloses a similar system for binding commands between a source and a target that further discloses associating the logic of operations corresponding to data objects that are represented by active and inactive states (column 7, lines 48-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to represent a collection of underlying state with underlying application logic because it was recognized as part of one of the ordinary capabilities of one skilled in the art. One would have been motivated to represent a collection of underlying state with underlying application logic in order to provide context sensitive data source objects.

c. evaluates the at least one binding statement and updates the target to a value associated with the command (page 5, paragraph 59). Specifically, Calder discloses using a command object to act on a data stream provided by the data handler in a desired way.

Claim 2: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Calder further discloses the command is a command object (page 3, paragraph 33).

Claim 3: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Friedman further discloses command objects are associated with delete states (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made at the time the invention was made to associate the command with a state in Calder. One would have been motivated to associate the command with state in order to designate the commands as context sensitive.

Claim 4: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 3 above, and Friedman further discloses command objects are created in the source context which is based on state (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made derive the command state from the source in Calder. One would have been motivate to derive the command state from the source in order to designate the commands as context sensitive.

Claim 5: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 3 above, and Friedman further discloses command states are associated with an ability to be executed (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to associate command states with an ability to be executed in Calder. One would have been motivated to associate command states with an ability to be executed in order to designate the commands as context sensitive.

Claim 6: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 3 above, and Friedman further discloses command states are associated with an inability to be executed (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to associate command states with an inability to be executed in Calder. One would have been motivated to associate command states with an ability to be executed in order to designate the commands as context sensitive.

Claim 7: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Calder further discloses the command is stateless (page 3, paragraph 33).

Claim 8: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Calder further discloses the command is a method (page 4, paragraph 44).

Claim 11: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Friedman further discloses command objects are linked (bound) in view of source context (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to allow the at least one binding statement to comprise an indication of a data source in Calder. One would have been motivated to include an indication of a data source in the binding statement in order to allow for the synchronization of command objects with target elements.

Claim 12: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Friedman further discloses command objects are linked in view of the context where the action is targeted (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a binding path with the at least one binding statement in Calder. One would have been motivated to include a binding path in the at least one binding statement to indicate the destination of the binding statement.

Claim 13: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Friedman further discloses further discloses linking individual command objects, where command objects are created asynchronously in the source context and the target context, with the source context command object linked (pointing) to the target context command object (column 2, lines 27-47). Though neither reference explicitly discloses the binding engine queries into a graph of objects, it would have been obvious to one having ordinary skill in the art at the time the invention was made to program a data binding engine to query into a graph of objects, comprising at least a first object and a second object wherein the first object points to the second object in Calder. One would have been motivated to query into a graph of objects for design choice. One would have been motivated to program the first object to point to the second object in order to allow synchronization for the execution of command objects.

Claim 14: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 13 above, and Friedman further discloses the second object is a command object (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to designate the second object as a command object in Calder. One would have been motivated to designate the second object as a command object in order to allow synchronization for the execution of command objects.



Claim 15: Calder and Friedman disclose a system for binding commands between a source and target as in Claim 1 above, and Friedman further discloses each command object includes a Boolean variable that indicates the current state of the command object, which indicates whether the command is done (inability of execution) or undone (ability of execution). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to program the command to comprise a Boolean state in Calder. One would have been motivated to program the command to comprise a Boolean state in Calder to ensure execution synchrony between linked command objects.

Claim 16: Calder discloses a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 1 above, that further discloses the target is a user interface (page 4, paragraph 45).

Claim 17: Calder discloses a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 1 above, but does not explicitly disclose the source comprises a collection of state of an underlying application. Friedman discloses a similar method and system for an application of a data-binding mechanism to perform command binding that further discloses the software application manages a number of contexts that control the state of the menu application (column 4, lines 40-55). Therefore, it would have been obvious

to one having ordinary skill in the art at the time the invention was made to include a collection of state of an underlying state in the source in Calder. One would have been motivated to include a collection of state of an underlying application in the source to provide a context sensitive source.

Claims 18 and 35: Calder discloses a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding, comprising:

a. receiving at least one binding statement that defines a mapping between the command and the target and maps a command to an element of the target (page 3, paragraph 33/page 5, paragraph 57). Specifically, Calder discloses associating (binding) a command with a data handler that is associated with the data source (target). The command map is used to locate the appropriate command for performing a desired operation on data provided by the source.

Calder discloses binding an object representing the target (data handler) to an underlying model object (data source) of an underlying application logic (the application obtains a data source that is appropriate for retrieving stored data) by a source object (data source object) and a query path (determining which data source is appropriate for retrieving stored data) (Page 4, paragraph 39-41). Calder does not explicitly disclose a collection of underlying state is represented by the application logic. Friedman discloses a similar system for binding commands between a source and a target that further discloses associating the logic of operations corresponding to data objects that

are represented by active and inactive states (column 7, lines 48-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to represent a collection of underlying state with underlying application logic because it was recognized as part of one of the ordinary capabilities of one skilled in the art. One would have been motivated to represent a collection of underlying state with underlying application logic in order to provide context sensitive data source objects.

Friedman further discloses each command object includes a Boolean variable (value) that indicates the current state of the command object (column 5, lines 55-67) and updating an attribute of the target to indicate that the operation of the command object is done or undone. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine a value of the command and update the target to the value of the command in Calder. One would have been motivated to determine a value of the command to specify the execution of the command.

Claim 22: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, and Friedman further discloses command objects are associated with delete states (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made at the time the invention was made to associate the command with a state in Calder. One would have

been motivated to associate the command object with state in order to designate the commands as context sensitive.

Claim 23: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, and Friedman further discloses command objects are created in the source context which is based on state (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made derive the command state from the source in Calder. One would have been motivated to derive the command state from a data source in order to designate the commands as context sensitive.

Claim 24: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, and Friedman further discloses command states are associated with an ability to be executed (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to associate command states with an ability to be executed in Calder. One would have been motivated to associate command states with an ability to be executed in order to designate the commands as context sensitive.

Claim 25: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, and Calder further discloses the command is stateless (page 3, paragraph 33).

Claim 26: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, and Calder further discloses the command is a method (page 4, paragraph 44).

Claims 27 and 36: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claims 18 and 35 above, and Friedman further discloses command objects that are created in a source context and determining a delete state (change notification) for the command objects when processing for execution. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to monitor a collection of objects comprising a data source for a change notification in Calder. One would have been motivated to monitor a collection of objects for a change notification in order to synchronize the operation of linked command objects.

Claims 28 and 37: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claims 27 and 36 above, and Friedman further discloses in response to detecting the change notification, comparing the updated state of the first command object with its linked command object (column 2, lines 27-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to querying into a graph of objects of the data source to determine an updated value of the command in response to detecting the change notification in Calder. One would have been motivated to determine an updated value of the command in response to detecting the change notification in order to synchronize the operation of linked command objects.

Claim 29: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claims 28 and 37 above, and Friedman further discloses each command object includes a Boolean variable (value) that indicates the current state of the command object (column 5, lines 55-67) and updating an attribute of the target to indicate that the operation of the command object is done or undone. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to update the target mapped to the command to the updated value of the command in Calder. One would have been motivated to update the target mapped to the command to the updated value of the command to specify the execution of the command.

Claim 34: Calder discloses a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, further comprising the target is an element of a user interface (page 4, paragraph 45).

Claim 38: Calder discloses a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, further comprising updating the user interface element (displaying the byte stream) associated with the command to the updated value of the command (page 5, paragraph 59).

4. Claims 9, 10, and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US 2001/0042140) in view of Friedman et al. (US 6,167,455) and further in view of Matsutsuka (US 2002/0026447)

Claim 9: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 1 above, however neither reference explicitly discloses the at least one binding statement comprises a statement in a declarative markup language.

Matsutsuka discloses a similar system for an application of a data-binding mechanism to perform command binding that uses an XML binding engine (page 5, paragraph 98).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a statement in a declarative markup language in the at least one binding statement in Calder. One would have been motivated to include a statement in a declarative markup language in order to allow the data to be shared across the Internet.

Claim 10: Calder, Friedman, and Matsutsuka disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 9 above, and Matsutsuka further discloses an XML binding engine, and supporting XML (page 5, paragraph 98). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use HTML, XML, or XAML as the declarative markup language in Calder. One would have been motivated to include a statement in a declarative markup language in order to allow the data to be shared across the Internet.

Claim 30: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, however neither reference explicitly discloses the at least one binding statement comprises a declarative statement in a markup language.

Matsutsuka discloses a similar system for an application of a data-binding mechanism to perform command binding that uses an XML binding engine (page 5, paragraph 98). Therefore, it would have been obvious to one having ordinary skill in the art at the time



the invention was made to include a statement in a declarative markup language in the at least one binding statement in Calder. One would have been motivated to include a declarative statement in a markup language in order to allow the data to be shared across the Internet.

Claim 31: Calder, Friedman, and Matsutsuka disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 30 above, and Matsutsuka further discloses an XML binding engine, and supporting XML (page 5, paragraph 98). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use HTML as the declarative markup language in Calder. One would have been motivated to include a statement in a declarative markup language in order to allow the data to be shared across the Internet.

Claim 32: Calder, Friedman, and Matsutsuka disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 30 above, and Matsutsuka further discloses an XML binding engine, and supporting XML (page 5, paragraph 98). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use XML as the declarative markup language in Calder. One would have been motivated to include a statement in a declarative markup language in order to allow the data to be shared across the Internet.

Claim 33: Calder, Friedman, and Matsutsuka disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 30 above, and Matsutsuka further discloses an XML binding engine, and supporting XML (page 5, paragraph 98). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use XAML as the declarative markup language in Calder. One would have been motivated to include a statement in a declarative markup language in order to allow the data to be shared across the Internet.

5. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US 2001/0042140) in view of Friedman et al. (US 6,167,455) and further in view of Weber et al. (US 6,889,180).

Claim 19: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, however neither reference explicitly discloses in response to determining that the at least one binding statement fails to evaluate, the value of the command is set to null. Weber discloses a similar method and apparatus for an application of a data-binding mechanism to perform command bindings that further discloses if a signal fails to evaluate, setting the value of that input (command) to a null value (column 4, lines 26-43). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to set the value of the command to null in response to determining that the at least one binding statement fails to evaluate in Calder. One would have been motivated to return a value of null if the binding statement fails to evaluate in order to notify the system that the binding operation did not execute.

Claim 20: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, however neither reference explicitly discloses in response to determining that the at least one binding statement fails to evaluate, the value of the command is set to a default value. Weber discloses a similar method and apparatus for an application of a data-binding mechanism to perform command bindings that further discloses if a signal fails to evaluate, setting the value of that input (command) to a null value (column 4, lines 26-43). The null value in this case is a default value. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the value of the command to a default value in response to determining that the at least one binding statement fails to evaluate in Calder. One would have been motivated to return a default value to provide a desired result.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al. (US 2001/0042140) in view of Friedman et al. (US 6,167,455) and further in view of Nickles (US 5,974,569).

Claim 21: Calder and Friedman disclose a method, computer program product, and apparatus for an application of a data-binding mechanism to perform command binding as in Claim 18 above, however neither reference explicitly discloses in response to determining that the value of the command is null, the target is disabled. Nickles discloses a similar system and method for an application of a data-binding mechanism to perform command binding that further discloses checking for a null value and returning an error message if the null value is returned (column 14, lines 1-15). Though neither reference explicitly discloses disabling the target if the value of the command is determined to be null, it would have been obvious to disable the target since the binding statement did not designate a target. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to disable to target in response to determining that the values of the command is null in Calder. One would have been motivate to disable the target in response to determining that the value of the command is null in order to improve system efficiency.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Abdul-Ali whose telephone number is 571-270-1694. The examiner can normally be reached on Mon-Fri(Alternate Fridays Off) 8:30 - 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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OAA  
1/03/2007



STEPHEN HONG  
SUPERVISORY PATENT EXAMINER